

In the Claims:

Please amend the claims as follows:

1-28. (Canceled).

29. (Currently amended) A device for detecting, measuring or monitoring the activities or concentrations of ~~acetylcholinesterase, butyrylcholinesterase, or both in a test sample wherein the device measures the reaction rates between acetylcholinesterase and butyrylcholinesterase and at least two substrates; and calculates the activities or the concentrations of acetylcholinesterase, butyrylcholinesterase, or both with sensitivity coefficients of each substrate for acetylcholinesterase and butyrylcholinesterase~~

at least one protein in a test sample, wherein the protein belongs to a plurality of proteins and the plurality of proteins have similar or overlapping properties towards a plurality of substrates, wherein the device comprises means for

adding the plurality of substrates to a plurality of aliquots of the test sample;

measuring reaction rates between the protein and each substrate;

determining the activity or the concentration of the protein using a sensitivity coefficient for each substrate and for each protein, wherein the sensitivity coefficient was determined from a sensitivity coefficient sample by

obtaining a plurality of inhibited dilutions of the sensitivity coefficient sample, wherein the plurality of inhibited dilutions comprise a plurality of concentrations of the protein which are partially to completely inhibited;

exposing each inhibited dilution of the plurality of inhibited dilutions to each substrate;

measuring the reaction rates between each uninhibited protein in each inhibited dilution and each substrate;

calculating the linear relationships between the reaction rates of each uninhibited protein and each concentration of the sensitivity coefficient sample at infinite inhibitor concentration; and

extracting each sensitivity coefficient of each substrate for each protein from the calculated linear relationships.

30. (Currently amended) The device of claim 26 ~~29~~, further ~~comprises a~~ comprising at least one cartridge comprising ~~the reagents, buffers, substrates and standards~~ a reagent, a buffer, a substrate, a standard, or a combination thereof for measuring the reaction rates.

31. (Currently amended) A kit for detecting, measuring or monitoring the activities or concentrations of ~~acetylcholinesterase, butyrylcholinesterase, or both in a test sample comprising substrates for acetylcholinesterase and butyrylcholinesterase~~ at least one protein in a test sample comprising the device of claim 29.

32. (Currently amended) The kit of claim 31, ~~further comprising a~~ wherein the device for ~~measuring~~ measures the reaction rates between acetylcholinesterase and butyrylcholinesterase and the substrates, and ~~calculating~~ calculates the activities or concentrations of acetylcholinesterase and butyrylcholinesterase.

33. (Currently amended) The kit of claim ~~31~~ 32, wherein the substrates for acetylcholinesterase and butyrylcholinesterase include acetylthiocholine, butyrylthiocholine, and propionylthiocholine.

34. (Original) The kit of claim 31, further comprising a chromogenic substrate.

35. (Currently amended) The device of claim 29 in the form of a ~~A~~ biosensor capable of detecting an agent which affects the concentration or activity of ~~acetylcholinesterase, butyrylcholinesterase, or both which comprises a known mixture of acetylcholinesterase and butyrylcholinesterase immobilized on a support and a sealed chamber containing the known mixture of acetylcholinesterase and butyrylcholinesterase~~ at least one protein in a test sample, wherein the protein belongs to a plurality of proteins and the plurality of proteins have similar or overlapping properties towards a plurality of substrates, which comprises a sealed chamber containing a known mixture of the plurality of proteins.

36. (Currently amended) A database of sensitivity coefficients for calculating the activities or the concentrations of ~~acetylcholinesterase, butyrylcholinesterase, or both made by a method comprising~~

~~obtaining a plurality of inhibited dilutions of a sensitivity coefficient sample, wherein the plurality of inhibited dilutions comprise a plurality of concentrations of either acetylcholinesterase or butyrylcholinesterase which is partially to completely inhibited;~~

~~exposing each inhibited dilution of the plurality of inhibited dilutions to each substrate in a plurality of substrates for acetylcholinesterase and butyrylcholinesterase;~~

~~measuring the reaction rates between acetylcholinesterase and each substrate;~~

~~measuring the reaction rates between butyrylcholinesterase and each substrate;~~

~~calculating the relationship between the reaction rates of acetylcholinesterase and each concentration of the sensitivity coefficient sample at infinite inhibitor concentration;~~

~~calculating the relationships between the reaction rates of butyrylcholinesterase and each concentration of the sensitivity coefficient sample at infinite inhibitor concentration; and~~

~~extracting each sensitivity coefficient of each substrate for acetylcholinesterase and butyrylcholinesterase from the calculated relationships~~

at least one protein in a test sample, wherein the protein belongs to a plurality of proteins and the plurality of proteins have similar or overlapping properties towards a plurality of substrates, made by using the device of claim 29.

37. (Canceled).

38. (New) The device of claim 29, wherein the device is an i-STAT® system, a Test-Mate OP™ unit, or a Biomek 2000.

39. (New) The device of claim 29, wherein the device is a handheld device.